

**MINUTES
of the
THIRD MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

**September 16-17, 2014
Western Commerce Bank Community Room
3010 National Parks Highway
Carlsbad**

The third meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Senator Peter Wirth, chair, on Tuesday, September 16, at 9:58 a.m. at the Western Commerce Bank in Carlsbad.

Present

Sen. Peter Wirth, Chair
Rep. Eliseo Lee Alcon, Vice Chair (9/16)
Rep. Thomas A. Anderson
Rep. Cathrynn N. Brown
Rep. David M. Gallegos
Rep. Stephanie Garcia Richard (9/17)
Sen. Gay G. Kernan
Sen. Carroll H. Leavell
Sen. Richard C. Martinez
Sen. John Pinto
Rep. Jim R. Trujillo

Absent

Sen. Carlos R. Cisneros

Advisory Members

Rep. Donald E. Bratton
Rep. William "Bill" J. Gray
Sen. Ron Griggs
Sen. Michael Padilla
Sen. Nancy Rodriguez

Sen. William F. Burt
Rep. Brian F. Egolf, Jr.
Sen. Stuart Ingle
Sen. Daniel A. Ivey-Soto
Rep. Emily Kane
Sen. William H. Payne
Rep. Nick L. Salazar
Sen. Clemente Sanchez

(Attendance dates are noted for members not present for the entire meeting.)

Staff

Gordon Meeks, Legislative Council Service (LCS)
Renée Gregorio, LCS
Carolyn Ice, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and written testimony are in the meeting file.

Tuesday, September 16

Welcome

After thanking former Senator Don Kidd for use of the space and Cindy Elkins for all of her help setting up, Senator Wirth introduced former Representative Jim Ott, who was also a former chair of the RHMC. Then Senator Kidd introduced Dick Doss, mayor pro tem of Carlsbad, who he described as being one of his harshest competitors and someone he respects greatly. Senator Kidd joked that his own judgment had been brought into question, however, when Mr. Doss ran for city council, but that he has brought a sense of reason to the council.

Mr. Doss explained that the mayor and his "sidekick", John Heaton, are in Washington, D.C., lobbying for the cleanup of the Waste Isolation Pilot Plant (WIPP); that Carlsbad supports WIPP 100% as a facility that is crucial to the nation; and that although the city was shocked at this year's accidents and feels they could have been prevented, the main concern is with preventing any recurrence. Carlsbad has been engaged in meetings first weekly, then biweekly and now monthly, related to the accidents at WIPP, and updates are posted on its web site, he mentioned. In addition, the Carlsbad Environmental Monitoring and Research Center (CEMRC) coordinates weekly meetings with the mayor's task force, which is similar to the committee formed when WIPP opened, which worked very well, he said. Mr. Doss was glad that the U.S. secretary of energy visited Carlsbad and reiterated the city's wish for WIPP's safe and timely recovery. He thanked the RHMC for meeting in Carlsbad.

The chair then asked committee members to introduce themselves, and within these introductions, Representative Bratton introduced his replacement, Larry Scott, who accompanied him to the meeting.

WIPP Status Report

Dana Bryson, deputy manager of the Carlsbad field office of the U.S. Department of Energy (DOE), started his job at WIPP in December 2013, only two months before both the salt haul truck fire and the radiological release, so much of his work has been related to the recovery. He gave some details of the truck fire, which include the following.

1. The truck fire occurred on February 5 and first burned hydrologic fuel and then tires.
2. Within an hour after the fire started, full accountability of the underground was achieved, which included evacuation of workers and the ventilation being changed to filtration mode.

3. Although it was clear from the response time and effectiveness that the workers know the mine and its ventilation system and assisted each other during the evacuation, many programs and responses were deemed inadequate, including the maintenance program and fire protection programs, emergency management programs, oversight from government agencies and the differing treatment of waste and non-waste handling equipment by the differing cultures in the facility (mine versus nuclear mind-sets).

Mr. Bryson reported that in terms of the radiological release, the shift to high-efficiency particulate air (HEPA) filtration happened within a minute of the alarm being received in the central monitoring room and Station A showing significant radiological contamination. Then a visual examination of the waste face showed a breached container, with all indications that a heat-producing event caused the breach. Mr. Bryson gave details of the work required since the breach up to the present, which included sealing dampers around the HEPA filters, taking samples and conducting visual inspections of all of the drums. He said that a 90-foot boom will be installed underground for visual mapping. In what he called the "radiological rollback" phase, surveys of impacted areas have been done and buffer zones identified so that now workers can go underground in street clothes in certain areas. He also explained the areas on a map of the recovery plan, which shows areas of contamination in yellow, the buffer areas where surveys have been completed that indicate no contamination in green and the no-color zones that have high contamination. He clarified that the Accident Investigation Board's (AIB's) review is completely independent of his office.

Mr. Bryson reiterated that safety is paramount in the recovery process. He said that WIPP's operations will transition into a facility with a contaminated area and a clean area, like most other nuclear facilities. He added that the AIB's findings will be prioritized and corrected before full operation and that a phased approach to recovery will be applied. As related to safety, compensatory measures will be put in place if corrective actions, such as roof bolting and stabilization of the mine, cannot be completed before the work begins. He added that his office is committed to transparency in its dealings with regulators.

Funding is, of course, a crucial aspect of the WIPP recovery; and in this regard, Mr. Bryson stated that the appropriation process continues for fiscal year 2015 and that recovery funding as well as base operational funding are needed to fix both maintenance and infrastructure issues in the best of times and even more so with the accidents. He said that his office is committed to follow-through after the AIB's findings and to ensuring the safety of the workers, the public and the environment as this process is worked through. Although this process has been difficult in some ways, because of the support of the congressional delegation and the good partnership with New Mexico's Department of Environment (NMED), Mr. Bryson remains positive regarding prospects for WIPP's full recovery.

In response to committee members' questions and concerns, the following points were discussed.

- There are more than a dozen oversight groups for WIPP, and there is a need for cohesive oversight rather than every group having its own "swim lane" where there is not communication across the whole pool of oversight groups.
- No personnel have been laid off at WIPP due to the accidents, which is due to the willingness of workers to work on recovery efforts in other areas of the site.
- The priority of the DOE is to remove waste from the waste-handling building into the underground and to get waste out of the Waste Control Specialists (WCS) site as well.
- The DOE wants procedures in place as part of an emergency management program before normal operations at WIPP are resumed so that when an emergency occurs, all are prepared to respond skillfully and correctly to ensure safety.
- Continuous air monitoring is in place at WIPP to detect further contamination as well as temperature analysis of the waste, which would be a precursor to any combustion of internal materials.
- WIPP does not have funding set aside for emergencies, but it does analyze risk and identify contingency funding.
- There is some bowing in the ceiling of the WIPP mine that has been deemed natural, but WIPP will resume bolting to ensure safety in the mine.
- What happened in the breached drum is an exothermal reaction or a chemical reaction that generated both heat and pressure, but it is not being termed an explosion.
- From the Carlsbad field office's perspective, containers in Room 7, in Panel 7 and in Panel 6 are of concern, and it is expediting the closing of those areas, per an NMED order.
- It is likely that a steady degradation of the "safety culture" at WIPP has been happening for the last 10 years.
- The recovery time frame is about 18 months.
- The truck fire was due to maintenance not being done at the appropriate level and combustibles built up, and this, combined with a hydraulic line rupture, caused a fire; hand-held extinguishers were ineffective and the fire spread to the tires.
- Some drums at the WCS are at varying levels of risk because the acceptable knowledge (AK) review process was not properly implemented and some of the drums containing nitrates also contain organics, which are essentially fuel.

Los Alamos National Laboratory (LANL) Update

Terry Wallace, senior intelligence official and principal associate director for global security with LANL, said he is in charge of all but the nuclear weapons operations at LANL and is the lead in recovery operations for WIPP activities. His work is to make sure that the transuranic (TRU) waste that is transported is safe, to create a remediation strategy and to facilitate the overall recovery at WIPP.

Mr. Wallace reviewed the time line as related to LANL's response to the radiological release and said that LANL has reviewed not only the science behind the release but also where LANL may be in violation. The technical assistance team was assigned as an independent check on what happened, but he is ultimately responsible for operations. He said that a large team of

scientists is working on the problem and will probably wrap up its report in the next six to 10 weeks.

In giving a brief history of the waste in the breached drum, Mr. Wallace said that this waste was generated by purifying scrap from the site at Rocky Flats during the Cold War era. The plutonium from this scrap needed to be contained, and most of it was not clean; so LANL had the job of cleaning it up and then sending it back to Rocky Flats, which ultimately produced the nitrate waste stream that was stored on site at LANL for 30 years. Mr. Wallace stressed that when the first fire occurred in Los Alamos in 2011, it became very clear that this material could not be stored above ground, and thus, the 3706 campaign was born, which set a time line for moving this stream of waste to WIPP. The breached drum was processed at the end of 2013, he indicated, neutralized, repackaged and sent to WIPP. It was placed there at the end of January, and 14 days later, the breach occurred. He said that there is still the question of whether the temperature change was generated internally or externally and that although the expectation was that there would be specific combustion products in the drum, that has not been found to be so as yet. He emphasized that the waste sat in this drum for over 30 years and nothing happened, but when the absorbent was added to this already complicated waste stream, a chemical reaction occurred. He admitted that it is clear that the LANL team did not comply with its Resource Conservation and Recovery Act permit for TRU waste characterization and treatment.

Mr. Wallace clarified that it is actually difficult to make drums react and that a key element in such a reaction is the presence of nitric acid, which is present in 678 drums, as well as nitrate salts, an organic absorbent, and metal impurities such as lead. Sixteen of those drums contain absorbed free liquid, and he said he cannot ensure that those drums were neutralized; eight drums have an absorbed free liquid with an organic liquid neutralizer; two of those drums contain a glovebox glove, as did the breached drum. He said that LANL will continue to work closely with the state to define the final remediation methods to make sure that the drums do not react and that the waste will need to be repackaged when a remediation strategy is determined. In addition, Mr. Wallace expressed frustration that even with the world's best scientists assigned to solve this, they have not been able to reproduce the conditions that caused the drum to breach.

In response to committee members' questions and concerns, the following points were discussed.

- The waste acceptance criteria were carefully constructed and are more than adequate; the failure was with LANL.
- WIPP has been very successful for 14 years, which likely bred some complacency in its culture.
- Although the drum in Panel 6 does not have the same characteristics as the breached drum, it is probably at risk and there is likely a glove in that drum as well, but it is not known whether that glove contains lead or not.

The RHMC recessed at 12:22 p.m., and when it reconvened at 1:30 p.m., it voted to approve the minutes from the July 23 meeting in Los Alamos.

NMED Update

Trais Kliphuis, former WIPP staff manager, NMED, was recently promoted to acting director of the Resource Protection Division, NMED, she announced, but she is still very involved with the oversight of WIPP in her new position. Ms. Kliphuis introduced two of her colleagues, Dr. Coleman Smith, who is on the WIPP team at the Hazardous Waste Bureau, NMED, and Dr. Michael Simon, who works out of the Carlsbad office. As an overview, she said that she would speak about the NMED's hazardous waste permit and the activities of the agency's DOE Oversight Bureau.

Ms. Kliphuis stated that there are many regulatory agencies involved in the shipment of waste from LANL to WIPP in addition to the NMED, and these include the New Mexico and the U.S. departments of transportation, the U.S. Nuclear Regulatory Commission (NRC), the U.S. Environmental Protection Agency (EPA), the Energy, Minerals and Natural Resources Department (EMNRD) and the NMED.

Next, Ms. Kliphuis reviewed the process of shipping waste from the generator site, which includes characterization and confirmation of that waste, to the WIPP site. She said that the waste is either contact- or remote-handled, that it is conveyed 2,150 feet underground into disposal rooms and that the waste is characterized prior to shipment to the WIPP site to ensure the absence of prohibitive items. This characterization process is required by permit and includes ensuring that the waste is not ignitable or corrosive and includes the quality control processes of AK, real-time radiography (RTR) and visual examination (VE). She added that other characterization techniques are regulated by the EPA, NRC and federal Department of Transportation. In addition, Ms. Kliphuis stated that the NMED asked LANL about the gloves this summer and that the AK review for that waste stream did not indicate whether the gloves were lead- or tungsten-lined.

After noting that there is a lot of checking and feedback that occurs in the confirmation process, Ms. Kliphuis reviewed the procedures related to the waste stream profile forms. What is verified at this stage is that the waste characterization information given meets the acceptance criteria required for waste analysis plan (WAP) compliance. Both RTR and VE data are obtained and the forms are submitted for the DOE's approval. Prior to the waste being shipped, the approved, completed forms must be sent to the NMED, she added.

Ms. Kliphuis then briefed the committee on the audit and surveillance program, which ensures that sites that transport waste to WIPP conduct testing according to the WIPP WAP and that the information given is in line with the waste screening and acceptability requirements of the WAP. After NMED staff validates the implementation of WAP requirements, an audit report has to be submitted for review and approval by the NMED, without which a site cannot ship the waste to WIPP. She added that the NMED is carefully studying this process to assess its

adequacy and efficacy. In addition, the DOE Oversight Bureau does environmental monitoring at WIPP, which includes monitoring of the exhaust air, ambient air, general environment and penetrating radiation. She reported that 158 filter samples have been obtained and submitted for isotopic analysis from the monitoring of exhaust air at Stations A and B and that 40 samples have been submitted for ambient air. She emphasized that the NMED has to make sense of these raw data and that the data are first reviewed with the DOE before being released to the public.

General environmental monitoring has also been occurring at the WIPP site and surrounding areas, which includes sampling sediment, surface water, soil and vegetation, she said. Also, penetrating radiation monitoring at 20 total locations has been accomplished, and results will be posted soon, she added. She referred members to a map showing where all the monitors reside, including the direct penetrating radiation monitors.

Ms. Kliphuis spoke about what the data reveal, which includes the extent of contamination and impact of the radiological release on the environment and the subsequent impact on human health, which can provide information to policymakers. She indicated that she is in full support of finding ways to get all of the agencies to work together and that the NMED is communicating well with WIPP. What is not working is the implementation of a recovery plan; the NMED does not yet have a copy of that plan, and the NMED has asked for an underground compliance plan but still has not seen one.

In response to committee members' questions and concerns, the following points were discussed.

- Although the NMED approved the initial portion of the closure plan submitted by WIPP for Panel 6, it asked for a modification of the plan the same day as the radiological release. The proposed plan has not gone through a public process yet, so the NMED is not comfortable using that design, and there is not yet a new design in place.
- The NMED is stressing the importance of communication with LANL to have a successful regulatory relationship, but LANL continues to withhold information.
- Audits do not include the waste treatment done at generator sites, only the repackaging and characterization process done afterward; the permit could be made clearer by including the generator site and a time line for these procedures.
- "Acceptable knowledge" is a questionable term at best; perhaps it needs to be named "process knowledge" and then leave the acceptability part up to the NMED to determine.
- Panels 1 through 5 are not sealed and Panel 7 is not yet full, so there could be transition areas in Panel 7 for other contaminated equipment to be stored before closing it. Also, mining of Panel 8 will resume at some point, but it has not been determined how this works with the recovery plan for WIPP.
- Explosion isolation walls exist on Panels 1, 2 and 5, but the use of such walls is still being debated for Panels 6 and 7.

- The recovery plan is still in draft form and not yet ready for public release.
- To get WIPP running again, the waste hoist should be completed at the beginning of October, and the waste voice tower needs to be completed as well as miles of ventilation system, repair of diesel equipment and the fixing of sheered bolts outside of Panel 6.

WIPP Monitoring

Russell Hardy, director, CEMRC, New Mexico State University, told the committee that CEMRC was initiated in 1991 at the request of a local citizen group that wanted to ensure independent monitoring of air, water and soil around the WIPP facility, and this has been reported by CEMRC for the past 15 years. Over time, the CEMRC has reported the presence of americium in its ambient air sampling but has determined that this radioactivity came from legacy fallout. In other instances of detection of trace amounts of plutonium in its sampling, the CEMRC concluded that these came from an outside source. The CEMRC was the first agency to detect and report a minor trace amount of radioactivity that was one-half mile from WIPP.

Mr. Hardy explained what occurs in Stations A and B, where air samples are collected in paper filters, isotopes of interest are separated out and filtration forces air into a building where the HEPA filters reside. In this way, the CEMRC can determine, for example, the amount of americium and plutonium flowing into and out of the system. He reported high amounts of americium in both stations during the first week after the radiological release at WIPP. The drastic drop in the amount recorded in week two, he explained, signaled that this was a one-time event because of the speed with which it settled. He said that in the last week of June, the amount is shown as quite low; and in terms of impact to public health, this is "a non-issue".

The ambient air monitors are high-volume samplers located at the WIPP site and 12 miles east of the WIPP site and both northwest and southeast of the WIPP site as control. Mr. Hardy said that these ambient air stations will be doubled in number, placing others in Loving, Hobbs and behind the CEMRC facility. The ambient air chart also shows activity at its highest in the first week, especially directly at the WIPP site, with 1.3 disintegrations per second of americium at the exhaust shaft itself. Activity was reported as half that much in the WIPP near-field sample and close to normal detection at the far sampling site, he explained.

Mr. Hardy detailed the collection of soil samples of Grids A-1 through A-8, and the CEMRC concluded that although there was fallout from a WIPP event that landed in the tested areas, the activity was not high enough to determine if this americium and plutonium was from WIPP or just from this area generally. He spoke of the Gnome site southwest of WIPP, which has been remediated twice, and noted that the CEMRC's current sampling, compared to the Gnome averages, shows that there is nothing in the soil other than what legacy waste caused. He then talked about the whole body counter at the CEMRC, which calculates radiation amounts in the body and lungs. Usually, the CEMRC counts 30 people annually, but since the February radiological event at WIPP, it has counted 47, of which none had a positive detection of americium or plutonium.

The CEMRC will add three new ambient-air monitoring stations by the end of the month and will also be able soon to perform whole body counting on children ages 12 through 18. Mr. Hardy said that he serves on the mayor's nuclear task force, that part of the task force's work is to get agencies to communicate and that the CEMRC has volunteered to be the lead agency to get the other agencies to the table.

In response to committee members' questions and concerns, the following points were discussed.

- A continuous air monitor underground serves to send a signal that triggers the shift to filtration; in the case of this shift, Station A fans shut off and Station B fans come on and then the air gets forced through to the HEPA filtering system.
- During the truck fire, this switch was manually initiated, so there is a need to better employ the emergency response procedures at WIPP.
- Although the CEMRC does not have a statutory responsibility to report its findings, its role is to report all of its findings. After the February release, the CEMRC took its samples on February 16 and reported results in three days, which were then released to the DOE and the media that same day.

Environmental Response

Don Hancock, Southwest Research and Information Center, presented the committee with an alternate view on some issues regarding WIPP, including speaking about some gaps in what the RHMC heard earlier in the day. Mr. Hancock said that last year, he discussed WIPP's mission of providing safe operations and transportation of TRU waste, meeting time frames for cleanup of that waste and closing and decommissioning the WIPP site by 2030. He stressed that WIPP has not been able to fulfill its mission in terms of the amount of waste it was to dispose of and that these problems existed long before the February 14 radiological release.

Mr. Hancock reiterated that there is no recovery plan, but he said that clearly there is an impact on Panel 7 and the amount of waste it can hold. He spoke of credibility issues in terms of fulfilling the mission and how the DOE misinformed the public. In addition, he reported that 22 workers were eventually told they were contaminated, but it took from 12 days to three months for them to be informed. Also, in the fire, one worker who suffered from smoke inhalation is still receiving treatment and may be permanently disabled because of it, Mr. Hancock said. Although the public was told there were no releases from WIPP in February, the public found out on February 19 that this was not so, when the CEMRC reported its findings. He then reviewed the amounts of radiation found in the underground area and spoke of the contamination not being limited to Panel 7 and the likelihood of contamination in all of the other panels and rooms. Mr. Hancock also stressed the importance of full disclosure in the release of information to the public, stating that since May 30, the DOE has not released its sampling data from Panel 7.

Mr. Hancock identified other major issues regarding lack of information, chiefly that the cause of the radiation release is still not known eight months after the event. He also spoke of

the importance of identifying the standard to which WIPP is recovering; before the release, there was no contamination underground and now there is, so he questions which standard will be used and said that this needs to be made clear. He also stressed that the relationship of the amount of contamination and worker exposure to that contamination needs to be addressed. The DOE has informed Congress that a new ventilation system and exhaust shaft are needed, but it is not clear what the cost will be or what sort of system is adequate, he added.

In reviewing the DOE's environmental management budget, Mr. Hancock said that 65% of all money is appropriated to two sites: Hanford and Savannah River, where there is a lot of high-level waste contamination. He reminded the RHMC that the amount of money being appropriated in this Congress is declining, which means that if some sites get more money, others get less; that is, it is likely that as WIPP gets more funding, LANL will get less. He surmised that what affects how Congress looks at a future budget is directly related to how WIPP is spending its money. Mr. Hancock said that in this regard, the Nuclear Waste Partnership did not fulfill its contract and that another part of the failure is with LANL. He also pointed out that WIPP has two contracts with companies to transport waste to WIPP and that CAST Specialty Transportation, Inc., for example, is currently earning over \$6 million to ship nothing.

Mr. Hancock believes that because of the failures and the continuance of inaccurate and insufficient information deriving from the current investigation, the DOE's investigations are not sufficient and that an independent investigation is needed. He delineated the scope of work for such an investigation. He then focused on the declining safety culture at WIPP and the speculation that after years of success, there is now complacency. He said that there has been much focus by the DOE on expansion rather than safety and that all of this should be dropped until the facility can be operated safely.

In response to committee members' questions and concerns, the following points were discussed.

- There is no system in place at WIPP for independent investigations to be conducted and to serve as a cross-check for the DOE's findings and to give independent credibility to the public that is both technical and informational.
- There are areas in underground where no one has been since the radiological release, and there are many areas of suspected contamination of the shafts, but this information has not been made public as it is still with the AIB.

Public Comment

Norbert T. Rempe, a resident of Carlsbad who worked at WIPP for 23 years as a geologist, spoke of his concern for his former colleagues at WIPP during the radiological release. Yet, he opined, the real hazards to WIPP employees come in the form of driving to and from work and having an accident; the highest risk is on the roads. The next highest risk, he said, is from underground fire and the third highest is a radiological release. Mr. Rempe questioned the accuracy of the AIB's reporting on the truck fire, which he said did not contain all of the relevant

information needed for analysis. He mentioned that the report spoke of the change in ventilation from regular mode to (reduced) filtration mode. However, nothing was said about the employees who called up from the underground when the smoke started going in unplanned and unexpected directions, requesting the ventilation being returned to its regular mode. This request from the underground was denied, which was also not reported. Mr. Rempe expressed his concern that these reports cannot be trusted.

Mr. Rempe stated that although he does not consider what happened on February 14 to be a catastrophe or a tragedy, the truck fire very well could have been, and the real risk is being overlooked. He spoke of how the transparency and openness of the DOE has been put into question several times, and he asked the RHMC to consider advocating for one person from the DOE to take charge of and report on its findings. He added that many problems are the result of long-term trends, that WIPP has diminished its communication with the local community and nationwide and that some management at WIPP has discouraged dissent. The emphasis has been placed on getting waste underground, with incentives to contractors who put the most waste in the ground, and some trends need to be reversed, he added.

In conclusion, Mr. Rempe reiterated that the figures given for radioactivity in the release are confusing because different presenters used different measurement units and that, anyway, the amounts are minute and not a hazard. He also clarified that the WIPP budget of \$220 million that Mr. Hancock spoke of is for the Carlsbad field office of the DOE as well, not just for WIPP, which uses a budget of \$80 million to \$90 million. He ended by saying that he wants WIPP to succeed in a smart, cost-effective fashion and that, as a taxpayer, he wants a list of what the public will get for a budget of \$130 million.

Mary Landreth said that she has heard that WIPP worked exactly as it should have during the radiological release but that she does not believe that to be so. She emphasized that people in the community were afraid and that plutonium, if inhaled, is very dangerous and lasts for 40 years in the lungs before causing harm. She said that she does not want plutonium in her lungs, that this is serious and that people are concerned. She implored the RHMC to ask the right questions, look into all the information provided and keep the residents safe.

The committee recessed at 3:45 p.m.

Wednesday, September 17

Right to Deploy Transmission by Distribution Utility

Varney Brandt, Duane Ripperger and Bill Grant of Xcel Energy presented to the RHMC on proposed legislation to provide for the right of first refusal (ROFR) to public utilities or generation and transmission cooperatives. Mr. Brandt reported that the proposal is similar to the legislation introduced in 2013. Mr. Ripperger explained that Xcel Energy is the holding company for four gas and electric companies that have a regulatory relationship: Southwestern

Public Service (SPS), the Public Service Company of Colorado and the Northern States Power companies of Minnesota and of Wisconsin. He added that the SPS transmission grid is in New Mexico and Texas and that the company employs 1,700 people and operates 7,000 miles of transmission lines with 107,000 customers in New Mexico. He likened Xcel's transmission lines to a highway that moves power from where it is generated to the load centers for customer use. He spoke of the positive impact of transmission to both the WIPP and URENCO sites and said that SPS is constructing 300 miles of new transmission lines for southeastern New Mexico, which will provide both sites with additional transmission, increased reliability and an ability to serve additional load requirements.

Mr. Ripperger then spoke about the ROFR legislation, which essentially gives the public utility the first right of construction, as in the past. Currently, some large lines are subject to a bid process, and oversight of the new lines is the responsibility of a federal agency, not the Public Regulation Commission (PRC). He said that this legislation continues New Mexico's oversight of transmission in the state. Among the benefits are that the PRC maintains oversight of the cost of transmission, of its reliability and of the need for, and cost and routing of, new lines built. Also, this would promote job growth at local utilities, he said.

Mr. Grant spoke about the roles of the Federal Energy Regulatory Commission (FERC) and the southwest power pool (SPP) in expanding the grid. The FERC regulates interstate commerce in gas, oil and electricity and enacts regulations to provide energy services, he added. FERC Order 1000, which was issued to meet public policy and reliability needs, ensures the build-out of transmission and enables a robust energy market across the region, he said. The SPS was already doing much of this, but it does answer to the FERC, implements rulings from the FERC, operates the regional transmission grid, operates the wholesale energy market throughout the SPP footprint across eight states and administers tariff and cost allocation of regional projects.

In giving a history of the ROFR policies, Mr. Grant said that public utilities with an obligation to serve had the ROFR on transmission facilities in their area and that even under a competitive process, if there are needs in an area that no one else can build on, it is Xcel's obligation to be the builder of last resort. In 2011, FERC Order 1000 removed the ROFR for public utilities while deferring to state policy, he added. In 2015, the SPP will enter its first set of competitive projects by soliciting proposals. In reviewing FERC Order 1000, Mr. Grant said that a May 2012 rule was passed to expand the electric transmission grid and that the SPP already had its regional transmission process in place. The three areas of focus for FERC Order 1000 included encouraging regional and interregional planning and cost allocation and replacing the federal ROFR by a bid process, he said. Mr. Grant stated that if Xcel built a transmission development company, it would be regulated federally, that what is needed is to form an unregulated company and that it is in the best interest of the state to maintain control. He added that the ROFR bill would apply to SPS, which would be responsible for building.

Mr. Ripperger then stated that the PRC oversight of rates keeps customer costs down and that the SPS profit margin is at 9.96%. He said that the FERC sets higher margins than are typically allowed by state commissions, which vary from 10% to 12.3%. He added that the ROFR bill maintains the PRC's oversight of the cost of transmission service and that the PRC is the customer's advocate for affordable and reliable service. Also, SPS has a lot of experience designing and owning lines, and, regardless of who builds the lines, the PRC is responsible for reliability of the system. The PRC also has oversight of the construction of new lines in the state; it validates need, cost and routing of lines before approval; and this ROFR legislation maintains such oversight by the PRC. In addition, Mr. Ripperger spoke about the jobs that SPS adds as the system grows, with SPS adding 46 positions over the past four and one-half years, which adds to the economic development of the state.

In summarizing the content of the ROFR legislation, Mr. Ripperger said that it provides public utilities, rural cooperatives and generation and transmission cooperatives the first option to construct new lines, given that it is approved by a regional transmission organization (RTO). The line has to be cost-allocated to all RTO customers. He added that this legislation only affects the current SPS service area and that El Paso Electric and PNM are not part of an RTO, so they are unaffected. The interconnection of new renewable generation or non-utility transmission lines are also not affected, he added, or not cost-allocated to members. So, non-utility lines such as SunZia or Tres Amigas would be free to cross the SPS footprint, he explained, and would not be affected unless they interconnected with SPS. Also, the legislation provides an ownership mechanism for lines between local utilities and cooperatives.

Mr. Ripperger informed the RHMC that seven other states have enacted ROFR legislation or have other laws that protect state oversight and that all states used to have ROFR but that the FERC eliminated that, recognizing the state's right to have its own legislation. He explained that the ROFR legislation is needed now to ensure that the PRC maintains control over the development of new transmission. He said that the SPP will request bids for transmission lines in 2015 and that SPS is well-positioned to compete as one of the lowest cost bidders. He added that although Xcel agrees with the FERC, it is important to expand the transmission system and this should not come at the cost of the PRC losing its control.

Sharon Segner of LS Power proceeded with updates on changes made in the last two years that could impact the ROFR legislation. She said that LS Power is one of the faces of transmission and is a large national energy company that raised over \$20 billion to support energy infrastructure across the U.S. She added that LS Power focuses on the generation and transmission side and, in the past two years, has completed 500 miles of competitively built transmission and a public utility in Texas and has applied to be qualified to develop transmission in the SPP. She expressed concern over the ROFR legislation because it is a complicated federal issue. After reviewing a map of New Mexico with its various transmission lines shown as well as the SPP's area, which is interconnected with several other states across the U.S. to supply transmission services, Ms. Segner said that in the last two years, the FERC voted 4-1 that competitive pressures should come into the transmission industry nationally because it is

anticipated that in the next 25 years, there will be \$300 billion in infrastructure needs nationally. She said that this is a policy matter and that because of the sheer amount of need, there should be competitive pressures to protect customers. She added that this issue is being hotly contested in Washington, D.C., with over 10,000 pages of legal arguments filed across the U.S. In addition, the FERC ruled that it believes it is in the best interest of the consumer that there be competitive pressure. She reported that last month, a court order was issued saying that utility interests across the country have to decide if they will appeal and that Xcel is a petitioner in this. She stated that the courts have spoken, that the FERC acted within its full legal authority and that the RHMC is being asked to weigh in on a federal issue. She added that from LS Power's standpoint, the state maintains full control under current law to say no in terms of permitting applications and that the federal government has not changed the state's ability to deny permits to any company, so no legislation is needed. She concluded that competitive markets are opening up all over the country and that LS Power has initiated the idea of a cost cap on its proposals, but ROFR legislation provides no incentive for cost caps. She opined that this legislation would shut off the state to competition.

Simon Whitelocke and Michael White of ITC Great Plains described how their company focuses on owning and operating transmission, has a good track record, has service territories like SPP's and has built transmission in other service territories. ITC feels that the proposed ROFR legislation is not necessary. Mr. Whitelocke and Mr. White reported that ITC operates in seven states and is the tenth-largest transmission-owning company in the country. ITC does not generate or sell electricity but serves as the conduit for transmission. ITC is a member of three RTOs and supports open and transparent regional planning processes led by the RTOs.

Mr. Whitelocke and Mr. White expressed ITC's support of the competitive model, with its own growth as an example, having grown from four to 20 employees since 2006. ITC is troubled by legislation that would prevent other utilities from competing in Xcel's territory, while Xcel would be competing in others' service territories. A state ROFR law would impede competition. They reiterated that the open and transparent transmission planning processes and competitive solicitation of the SPP are cost-effective and benefit customers. Also, RTOs have developed processes with the help of utilities to ensure that companies given bids are capable and that before, during and after a construction award, any company would have to conform to all state regulations of the PRC. They concluded by saying that the need for transmission investment is clear and that the SPP has an open process for the development of transmission, which will drive innovation, drive down costs and benefit customers. They asked, then, what problem are we trying to solve with this legislation?

In response to committee members' questions and concerns, the following points were discussed.

- Perhaps the SPP did not think there were enough transmission lines being built nationwide and doing away with ROFR legislation was the FERC's way of spurring

transmission build-out, but the FERC's solution is a "one-size-fits-all" solution to a nationwide problem.

- The entity that constructs a transmission line maintains that line; there are both federal and state laws regarding reliability standards for companies awarded projects; and all companies have to be qualified by SPP standards.
- With ROFR legislation, the planning process stays the same as with the SPP; what changes is that it does not have to go out for a competitive bid process.
- Mainly for projects needed within three years, these would likely go to the incumbent utility, but further out, these projects are subject to a competitive bid process.
- Utility companies are responsible for repair and maintenance of the lines they construct.
- When the SPP awards a contract, the utility company has a time frame within which to accept it, and if it does not, the SPP goes to another company.
- The average cost of service depends on the terrain, and the federal government has created a mechanism whereby a company can go into a low-cost area and the cost-sharing is then picked up by the end user. Prices can be depreciated because of tax structure, too. But if there is a transfer of ownership, the rate is determined at cost, not at the market price; the FERC does not allow a utility company to pass on acquisition premiums.
- Xcel is creating its own company to compete in other areas as a transmission development company.
- All ROFR bills are not the same, and the language in the proposed New Mexico legislation is some of the broadest of any of the states.

Carlsbad Brine Well Status

Jim Griswold, senior hydrologist, EMNRD; David Martin, secretary, EMNRD; and John Lommler, principal geotechnical engineer for AMEC Environment & Infrastructure, Inc., presented issues related to the Carlsbad brine well. Mr. Griswold thanked the RHMC for inviting them and mentioned that presenting to the committee has been an annual event for six years running. He said that monitoring continues and includes bore-hole tiltmeters, microseismicity, cavern pressure gauges, ground water levels and canal and soil temperature monitoring. In thanking Representative Brown for her assistance in securing property access, he added that the microseismic monitoring system has been in operation since early in the year. Mr. Griswold reported that the expenditures from the reclamation fund of the oil and gas industry total over \$4 million, with over \$1 million of that reimbursed from the state, and the City of Carlsbad has been fully reimbursed for its expenditures. He said that AMEC is operating under a professional services agreement, with a contract that has been extended to June 2015. As well, the feasibility study is completed and totals 2,600 pages.

Dr. Lommler gave details on the study, saying that AMEC has spent over two years on it. The site was monitored using existing and new instrumentation. He said that rock and soil samples were taken, and it was determined that the geology is unique, which helped AMEC to understand why other brine wells have collapsed and this one has not. Alternatives for

stabilizing the roof were also reviewed. The final report was delivered in August, he added. Some details from the feasibility study fact sheet for the I & W Brine Cavern include the following.

- The cavern is near the "south Y" in Carlsbad.
- The underground void in the Salado Formation from the production of brine by I & W Inc., is approximately 200 to 350 feet wide, 685 feet long and 110 to 80 feet high.
- The cavern roof will fail if not stabilized.
- There is a high probability of catastrophic failure of the cavern within 10 to 25 years.

Dr. Lommler said that AMEC tried to determine which portion of the cavern would collapse first, which turns out to be the central portion, two-thirds of the way down. He indicated that the roof is collapsing and debris is collecting at the cavern bottom. An arch is being formed in this process by the rounded chunks that are falling, which creates a critical situation if the cavern fails before the arch is completely formed. He stressed that there is time to take action, but not much time.

Among the remedies indicated on the feasibility study are the following:

- institutional controls (ICs) with monitoring;
- cavern abandonment with monitoring and ICs;
- controlled collapse; and
- in situ fill with monitoring and ICs.

He said that the feasibility study simply presents alternatives that need to be considered in protecting the public, the property and the environment. With the IC alternative, people would have to be kept off the property and the cost would be \$240,000 annually. Cavern abandonment with monitoring would be in the chamber itself and would not fully protect the public but could reduce the hazard; but the roof could still collapse, and this annual cost would be \$320,000. A controlled collapse would be a permanent remedy and would reduce the immediate hazard but could produce long-term problems, including cavern growth and a risk of contaminating the ground water and requiring the rerouting of both the road and canal, which would cost \$50 million. The final alternative of in situ filling and monitoring would also be a permanent remedy, would fill the cavern with something prior to its collapse to stabilize it and would then require monitoring. He indicated that if this is done within the indicated time frame, this should avoid roof collapse. This would cost between \$15 million and \$25 million.

In response to committee members' questions and concerns, the following points were discussed.

- There are no active brine wells in New Mexico at present.
- The reclamation fund has an unencumbered balance of \$6 million, and the fund was set up originally to plug abandoned wells and facilities, but then legislation modified

the rate at which money went into the fund without a designation as to where the money was to be spent.

- Fill used would be aggregate fill, such as sand or gravel, with cement used to top it off; the bulk of the cost with this option is for materials and transportation.
- Federal resources are possible but cannot be tapped until and unless the cavern collapses.
- The EMNRD's view is that dealing with the potential collapse is a local issue, and there is not enough money in the reclamation fund to provide a remedy, although the EMNRD could assist with attaining funding.
- The brine cavern's proximity to the surface makes it less stable than deeper caverns, and time is certainly of the essence in dealing with this potential disaster.

Public Comment

Mr. Doss addressed the RHMC again, thanked the committee for its time, and he assured members that the city will find a solution quickly for this brine cavern problem. He added that Ned Elkins told the city that the collapse was imminent, that the city has been working on this issue and that the city appreciates the state's effort in helping Carlsbad solve this.

Mr. Elkins stated that when this potential collapse became known in Carlsbad, the community began aggressively working with its own resources to come to a solution and appreciates the work that the EMNRD has produced. He clarified that the sense is that the cavern would eventually collapse, and from early on, the city understood that there would be a slow failure of the arch. He stated that filling creates a load issue and that waiting until the end of the statistical period to fill is the worst option. He speculated that mine tailings have good characteristics for fill that should be considered. Mr. Griswold, though, replied that the cavern is not large enough to take the grain size and that the current backfilling model assumes 27 vertical holes would be used, none directional.

A field representative from U.S. Senator Tom Udall's office suggested that Eddy County could be declared a disaster area, which might allow the area to qualify for additional funding. Another suggestion, based on the city's strong cash flow stream, was to issue municipal bonds.

Adjournment

There being no further business, the RHMC adjourned at 12:02 p.m.